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WATER LINES

NEWS FROM THE WATER RESOURCES DIVISION
OF THE MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION

WATER NEWS

WATER RIGHTS AND ROAD CONSTRUCTION

By Kim Overcast

Generally, anytime you take water out of an existing stream, lake, or ditch, you're legally required to have a water right. For contractors needing water for road construction purposes, that meant getting the approval of the Montana Department of Natural Resources and Conservation (DNRC) by applying for a new water use permit or to change an existing water right. A filing fee of $200 was required, and the time period for obtaining the water right could take up to one year.

Compliance with Montana's water use laws, as they apply to road construction and dust control, became easier with the passage of a new law by Montana's 57th Legislature. The law, House Bill 33, was signed by Governor Martz and became effective on April 27, 2001. The law allows for a 90-day lease of an existing water right without obtaining prior approval from DNRC.

The new law allows for the lease of water from an individual who holds a valid Montana water right. The law applies to diversions of water that do not exceed 60,000 gallons a day or the amount of the existing water right, whichever is less. Further, a combination of short-term leases cannot exceed 120,000 gallons a day for one project.

Thirty days prior to the use of the water, the lessee must publish a notice of the proposed use in the local newspaper. As an alternative, the lessee may mail individual notices to potentially affected water users in the area of the proposed point of diversion. The published notice or the individual notice must contain the information listed in numbers 1 through 10 and 13 below.

The lease agreement must include the following.

1. The name & address of the lessee.
2. The name of the owner of the water right.

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North Fork Blackfoot River Hydrologic Study Available

A hydrologic study conducted on the North Fork Blackfoot River was recently completed and is now available in report format from DNRC. The study characterizes current hydrologic conditions of the North Fork Blackfoot River and its tributaries in the Kleinschmidt Flat area. Key to the study is how natural influences, such as seepage, and human-caused influences, such as irrigation, affect the interaction between surface and groundwater resources and, ultimately, instream flows. For more information or to obtain a copy of this document, call Mike Roberts at 406-444-6641.

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THE WEST GALLATIN RIVER ENFORCEMENT

By Carol Brown and Rita Nason

When District Court Judge Tom Olsen retired from the 18th Judicial District in Gallatin County last year, Mark Guenther was elected District Court Judge. Les Aaberg, the West Gallatin River water commissioner for the last 17 years, also retired. Faced with the need to appoint a new water commissioner in an extremely dry year, Judge Guenther asked whether the Montana Water Court's Temporary Preliminary Decree for the West Gallatin River was enforceable. Unfortunately, at this time it is not. But, the Water Court and the Department of Natural Resources and Conservation (DNRC) were thrilled with the opportunity to assist a District Court, and to learn whether Montana's statewide adjudication efforts over the past 20 years are usable for enforcement purposes.

Gallatin River* - *Photo by Scott Compton

Carol Brown with the Water Court and Rusty Taylor with DNRC met with Judge Guenther, his administrator Dorothy Bradley, and Gallatin County Clerk of the District Court Lorraine Van Ausdol to determine exactly what was necessary. Judge Guenther needed current information on owners, flow rates, and points of diversion for the irrigation water rights out of the West Gallatin River and Baker Creek between Gallatin Canyon and the I-90 freeway. These rights were decreed in Bell v. Armstrong, Cause No. 3850, Gallatin County (1909). The commissioner would need this information for a distribution and recording program, as well as for a billing program for the amount of water distributed.

After discussions with Jim Kindle, DNRC water right data specialist, Rita Nason, DNRC adjudication program manager, and Chief Water Judge C. Bruce Loble, it was determined that the information Judge Guenther requested could be arranged into the necessary records. These records could be posted on the Internet, updated periodically, and available to the water commissioner, water users, District Court, and Clerk of Court.

Judge Guenther was delighted with the proposal and brought interested water users and citizens together for a "Water Meeting" to announce the project and get their input. The Water Meeting was held on Monday, March 26, 2001, at 7:00 p.m. in the Community Room of the old Gallatin County Courthouse and was very well attended. Staff from the Bozeman Water Resources Regional Office and the Water Court attended and assisted Judge Guenther in addressing the water users' concerns and questions. The overall input from the water users was very encouraging, and thus the West Gallatin River Enforcement Project was initiated.

A task force consisting of Dorothy Bradley, Carol Brown, Rusty Taylor, Jim Kindle, and Rita Nason was informally developed. Each took charge of those parts of the project within his or her individual areas of expertise.

From water right information stored in DNRC's database, Jim Kindle prepared an index of all previously decreed irrigation rights within a specified stretch of the West Gallatin River. These water rights were included in the Water Court's West Gallatin River Temporary Preliminary Decree issued September 26, 1985. This index included clarification and issue remarks on ownership, flow rate, source, points of diversion, and means of diversion. Jim also produced point-of-diversion and

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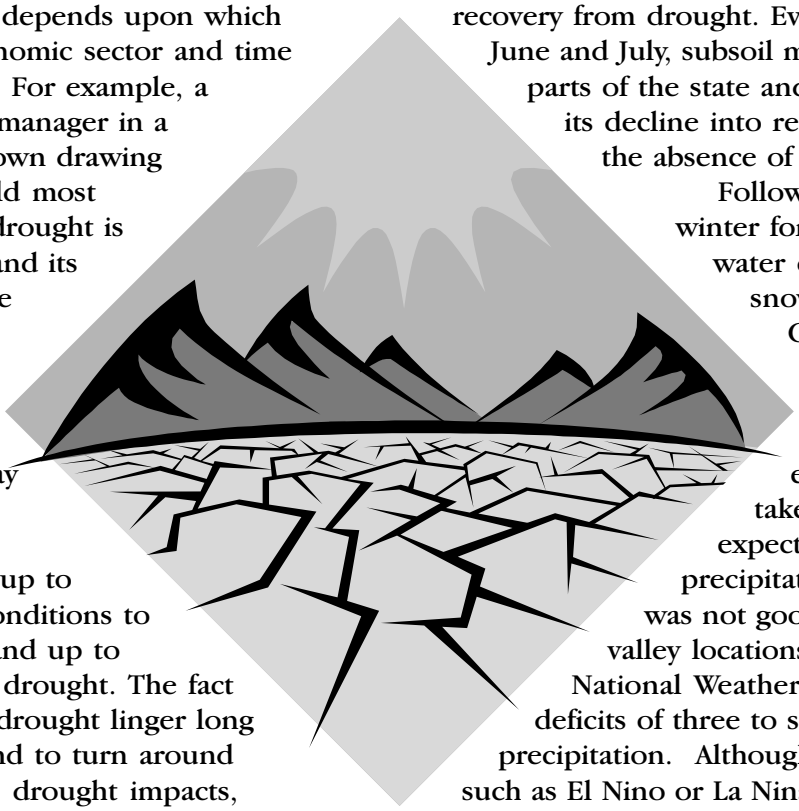
WHEN DOES A DROUGHT CEASE TO BE A DROUGHT?

By Jesse Aber

Following a couple of nasty drought years that wrought hardship and expense on many Montanans and our resources, this question is being asked once again. Of course, it is not an easy question to answer and depends upon which natural resource or economic sector and time frame one is addressing. For example, a municipal water supply manager in a small central Montana town drawing from groundwater, would most likely answer: "No, the drought is not over. It continues, and its effects may be felt for the next two or more years, absent a wetter-than-average fall, winter, and spring."



The same answer may very well come from a reservoir operator or a hydrologist. It may take up to three years of normal conditions to bring reservoir storage and up to average levels following drought. The fact is that many impacts of drought linger long after recovery begins. And to turn around long-term or cumulative drought impacts, recovery must be sustained over an extended period of time.

Other impacts from periods of low precipitation occur almost every year, and do not necessarily signal the presence of drought. If the wildfire season takes off, doesn't that mean we are still in drought? It is normal to have a wildfire season each year in Montana in August. The Montana Drought Response Plan defines drought as an extended period of below normal precipitation which causes damage to crops and other ground cover; diminishes natural stream flow; depletes soil and subsoil moisture; and because of these effects, causes social, environmental, and economic impacts to Montana.

Some folks believe that a drought is over when cool temperatures return in the fall and the first snows decorate the mountain ridges across the state. In a way, we do get a fresh start on our water supply each year. Consequently, the "Water Year" to a scientist or an irrigator begins October 1 and ends September 30 of the following calendar year.

However, the assertion that a drought ends in the fall with the passing of the equinox and the arrival of early high elevation snows tends to overlook the balance sheet from the preceding year. And 2001 was a good example of how precipitation deficits can continue to thwart recovery from drought. Even after the rains of June and July, subsoil moisture remains low in parts of the state and streamflow continues its decline into record low territory in the absence of groundwater base flow.

Following another lackluster winter for accumulation of snow water content in mountain snowpacks, the Montana Governor's Drought Advisory Committee decided that February was not too early to reconvene and take stock of what to expect for water supply and precipitation for 2001. The news was not good. A number of sites at valley locations monitored by the National Weather Service revealed deficits of three to six inches of precipitation. Although no climate anomalies, such as El Nino or La Nina, were present, it was apparent that, short of a banner spring for moisture, Montana would be in for drought impacts, perhaps worse than experienced in 2000.

The sobering prospect of another year of livestock water and grass shortages, limited water for irrigation and instream resources, and another fast and furious wildfire season prompted the drought committee, on April 2, to put all 56 counties on "Drought Alert," the first of two response thresholds identified in the Montana Drought Response Plan. Above average moisture in much of the state in April was not enough to keep the committee from assigning 41 counties the plan's second level of response, the "Severe Drought" status, at its May 17 meeting in Helena.

On May 30, Secretary of Agriculture Ann Veneman, recognizing the continuing nature of drought conditions in Montana and in response to the request of Governor Martz and our Congressional Delegation, assigned a Natural Disaster Determination (NDD) status for all 56 Montana counties. NDD status paves the way for low-interest loans, extensions of previous loan

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BROADWATER PLANT GENERATES ELECTRICITY AND REVENUE FOR MONTANANS

By Tim Kuehn

The Broadwater Hydroelectric Power Project, located on the Missouri River near Toston, is owned and operated by the Montana Department of Natural Resources and Conservation (DNRC). Daily operation of the plant is conducted by four DNRC employees: Walt Anderson, Hydropower Section supervisor; Mike Sims, plant superintendent; Brian Carroll, plant operator; and Jim Beck, backup plant operator.

The department was granted an electrical generating license from the Federal Energy Regulatory Commission (FERC) in 1984, and construction of the project was completed in June 1989. Total construction costs were $26 million, and financing was obtained through the sale of state revenue bonds.

***Toston Dam** - Photo by Walt Anderson*

The dam is a 26-foot concrete overflow structure with Bridgestone rubber gates serving as water level controls. The maximum generating capacity of the project is 10 Megawatts (MW), with an average annual capacity of 6 MW, depending on annual precipitation and runoff in the upper Missouri River basin. The turbine is capable of transmitting 7,000 cubic feet of water per second.

In the early years of operation, numerous emergency shutdowns due to various mechanical and electrical problems were experienced. In addition, the generator and speed increaser were deteriorating, stemming from a defective design. The department initiated arbitration proceedings with the turbine generator contractor in order to repair the defective components. In 1993 the department received a favorable ruling, requiring the contractor to correct the major problems. Major rehabilitative measures were performed in 1995, and currently the project operates with a 97 percent operating availability.

In 1987 the department entered into a 35-year contract with Montana Power Company for the sale/purchase of the project's electrical generation. Contract power rates were established by the Public Service Commission. The project receives 5 to 5 1/2 cents per kilowatt hour, producing an average gross revenue of $3.1 million per year. Revenue from power sales is used to pay operation and maintenance costs and repay revenue bonds. Surplus revenue is deposited into a special account that finances rehabilitation of other state-owned water projects. To date, the project has generated over $3 million in surplus funds.

In an effort to improve efficiency and increase power generation, the department constructed a rock barrier that separates the turbine intake from the Broadwater - Missouri irrigation canal intake. Isolation of the two intake structures allows higher power-generating levels during spring runoff without reducing flows into the canal diversion. The department is currently negotiating with a manufacturing firm to replace the existing trash rake machinery with a more effective design.

A major component of the power plant's construction was mitigating damages to fish and wildlife. A 16-acre wetland area was built to replace wetlands destroyed when the reservoir level was raised. Improvements have also been made to trout spawning habitat in the Toston to Canyon Ferry reach of the Missouri River to replace trout fatalities from turbine operation.

The department is responsible for monitoring and reports annually to FERC to verify the continued success of the project for the term of the FERC license.

(Drought continued from Page 3)

deadlines, and tax benefits from the Internal Revenue Service for producers hit hard with forced livestock sales and crop losses. Essentially, the federal government had recognized that the drought of 2000 was still alive and growing in 2001. And in places like Stillwater, Carbon, Liberty, Toole, Teton, Cascade, and Chouteau counties 2001 would be the third or fourth year of continuing drought.

On June 6, the 15 counties remaining on Drought Alert status received the Severe Drought designation. Grazing of Conservation Reserve Program (CRP) lands was approved in most counties by mid-June and on July 10 haying of CRP lands was approved for a number of counties. By mid-June, the rains began to arrive, breathing life back into stunted and marginal range grasses, alfalfa, and grain crops.

According to the National Weather Service at Great Falls, June precipitation at month's end ranged between about 110 and 190 percent of average. Although June is our wettest month of the year over much of Montana, and totals at some locations were over four inches, the Water Year numbers for the seven climate divisions of the state continued languishing in the 70 to 85 percent of average range with the exception of the northeast division at about 120 percent of average.

July continued the improved precipitation trend with monsoon moisture tracking north from the southwest U.S. to deliver as much as six and seven inches of rain in some locations of eastern Montana. Suddenly, flooding from flash rain events was a reality for some locations. It reminds me of the title on one old precipitation map: "Montana – Water Rich, Water Poor."

As we brace for the remaining month and one-half of summer, an air of complacency has settled around many a city dweller and other folks across the state. After all, in the four-month period from April 1 through the first few days of August, or about one-third of the year, Montana towns have received anywhere from six to a whopping thirteen inches of rain at Miles City and Culbertson. Still, pockets of drought languish in places like Dillon, Shelby, and Polson. And at the August 16 meeting of the drought committee, the Weather Service was not hopeful for much more than the one to one and one half inches of precipitation we expect in August.

Reports of full stockwater ponds and waves of tall green grass have overshadowed news from other parts of the state of falling streamflows and reservoirs and increasing wildfire potential. A quick review of current streamflow conditions reveals that in many places we are now seeing low flows that did not occur until the end of August in 2000. According to U.S. Geological Survey records, the 1934 all-time daily low streamflow records of the Yellowstone River at Billings and at Sidney were broken by August 12, 2001.

What will it take to end this hydrologic drought? A prolonged period of above average fall and winter precipitation, resulting in an abundant mountain snowpack, would be good for starters. And for the remainder of 2001, or the short term, we need more of what much of the state has been fortunate to receive over the past two months – moderate temperatures and continued timely precipitation.

In conclusion, no one could have imagined a better reversal of fortune for moisture in most parts of the state for summer 2001 given conditions as they were as late as June 10. And we may look back nine months from now and be confident saying recovery from drought was well underway by July 2001. The fact remains that at any given time, some area of our vast state is entering, in the midst of, or recovering from drought.

So, although a strong case can now be made for the beginning of the end of drought in parts of the state, please give me until late spring of 2002 to let you know whether I believe we remain in drought, or until late summer 2002 to answer whether we are in a new drought or out of the drought that began in 2000! Excuse me, the one that began in 1998 in the Golden Triangle, or 1997 in Stillwater County, or, Well, you get my point!

WATER LINES
On-Line

Water Lines can now be accessed on the Web at:
www.dnrc.state.mt.us/wrd/newsletters.htm

We are currently developing an email address list to notify readers when the newest issue of Water Lines has been posted on the Web. A message will be sent to you connecting you to a link that will take you directly to the newsletter. If you prefer to be on our email notification list, rather than our mailing list, please send your email address to me at cforgey@state.mt.us. Please help us keep rising printing and distribution costs down.

(West Gallatin continued from Page 2)

owner indexes.

From the point-of-diversion index, Rusty Taylor developed a list of water rights for each ditch and canal within the project area. This task required an incredible amount of research and contact with water right owners, as the West Gallatin River basin was one of the first basins the Water Court decreed and did not include much of the information now included in decrees. Through his work, Rusty was able to identify proper ditch names that would eventually be added to each water right, as well as discrepancies with the decreed points of diversion.

With information provided by Jim and Rusty, Carol Brown created a "Decree Index for the West Gallatin River and Baker Creek" which included 405 claimed water rights in the Bell v. Armstrong decree. Carol utilized as many resources as she could find to ascertain new owners and current addresses, identify quantities of water in split rights, and generally follow up on problems that arose. A list has been prepared of issues and claims that are in need of resolution before the adjudication of the Temporary Preliminary Decree can be completed for the water rights on the West Gallatin River and Baker Creek. The Water Court will attempt to resolve these issues as quickly as possible so that Judge Guenther will have the opportunity to enforce a Water Court decree.

Jim Gilman, DNRC water resources specialist, and Regina Fullerton, DNRC coding specialist, were enlisted to assist Rita Nason in updating the 405 water right records in the DNRC database with current ditch names and information pertaining to the basis of the historical decreed right being claimed. In addition, printed maps are being prepared from digital data that will identify the location and ditch name for all diversions within the project area.

Rita's team also reviewed and reported their finding on every Authorization to Change file issued by DNRC within the West Gallatin Project area. With the assistance of Rusty, "DNRC Reports to the Water Court" were prepared outlining essential details of the change files and recommendations for Water Court and DNRC action.

Dorothy Bradley and Judge Guenther arranged a meeting with Les Aaberg and the task force to gain commissioner input. Judge Guenther appointed Dave Pruitt as the West Gallatin water commissioner in April of this year. Dave was immediately swept into the task force, brought up-to-date, and given charge of the final products of the project. The task force assisted Dave in preparing a letter and questionnaire to the water users designed to provide notice of Dave's appointment and to gain additional information.

Approximately 300 letters and questionnaires were mailed to water users in the project area. The letter introduced Dave Pruitt as the new water commissioner and requested information necessary to update not only the water commissioner's records, but the DNRC ownership records as well. The number of responses, which are still coming in, have been better than expected. The task force is following up on changes to ditch lists, updating owner lists and indexes, making a list of rights that will not be in use this year, and updating the final records from the project.

Information on the West Gallatin River Enforcement Project is available on the Internet at ftp://flathead.dnrc.state.mt.us/water/w_gallat.htm. This site provides access to information on selected named ditches, the priority ranking of decreed rights, abstracts for the 405 water rights, updated owner information, and a water delivery spreadsheet. The site also provides a link to the USGS gauging station on the Gallatin River near Gallatin Gateway.

The tremendous team spirit brought to this effort by all involved has been incredible. The task force thanks Judge Loble, Judge Guenther, Curt Martin, and Scott Compton for allowing us the time and opportunity to contribute to a project of this magnitude, and for the opportunity to build strong, positive relations between DNRC, the Water Court, the District Court, and the water users. Without the unqualified faith and support of these individuals, the West Gallatin River Enforcement Project would not have happened.

BAIR DAM AND NEVADA CREEK DAM REHABILITATION PROJECTS TO BEGIN THIS FALL

By Jim Domino

Aerial Photo of Nevada Creek Dam
- Photo by Horizons, Inc.

The Bair and Nevada Creek Dam Rehabilitation Projects are set to begin in mid-September 2001. The grant and loan applications submitted to the DNRC's Conservation and Resource Development Division in May 2000 were approved, with both projects fully funded by the 2001 Legislature. HKM Engineering Inc. of Billings was selected this past July as the design consultant for each project. The State Water Projects Bureau will be soliciting bids for construction contractors in August, with work tentatively set to begin the week of September 16, 2001. The rehabilitation proposed for both Bair and Nevada Creek Dams involves the construction of new spillways, seepage drains, and outlet works outlet structures. Construction will be accomplished using a phased approach. Phase I construction, which involves mostly earth-moving work, will occur during the fall of 2001, with Phase II, the installation of the new spillways, scheduled for the summer and fall of 2002. Both rehabilitation projects are to be completed in time for the 2003 irrigation season.

Aerial Photo of Bair Dam
- Photo by Horizons, Inc.

(Water Rights continued from Page 1)

3. The water right number.
4. The purpose of use for which the lease is being made.
5. The source of the water to be used.
6. The starting and ending date of the proposed water use.
7. The proposed point of diversion and place of use.
8. The flow rate at which water will be diverted and the volume of water that will be used during the period of use.
9. A description of how the existing use of water will be reduced to accommodate the use for which the lease is intended.
10. For irrigation, the lease must show the number and location of the acres that will be removed from irrigation.

At least two days prior to the water use, the lessee must submit the following information to DNRC.

11. A copy of the public notice or copies of the individual notices.
12. A copy of the lease agreement.
13. If the short-term lease is greater than 60,000 gallons a day for one project, an analysis of any potential adverse effects and a description of planned actions to mitigate any possible adverse effects to water users in the area.

An existing water user whose right is not being satisfied may file a complaint with DNRC and could cause the short-term lessee's diversion to end. However, the lessee can continue to use the water if the water use has no impact on the existing water right.

MONTANA WATER TRIVIA

What are the four "Wild and Scenic River" stretches in Montana?

Answer: North Fork, South Fork, and Middle Fork of the Flathead River, and a stretch of the Missouri River downstream from Fort Benton.

WATER RESOURCES DIVISION EMPLOYEES RECOGNIZED AT AWARDS CEREMONY

By Cindy Forgey

On August 9, 2001, an awards ceremony was held in Pioneer Heritage Park in Helena to recognize Water Resources Division staff for outstanding performance and longevity.

Administrator Awards were given to Mary Ellen Wolfe for her dedication and hard work in developing the Montana Watercourse education program and to Mike Roberts and Mike McLane for their dedication in improving water management on the Blackfoot River.

Special Recognition Certificates were also given to Rich Moy, Larry Dolan, Jesse Aber, Velda Welch, Dave Amman, Mike McLane, and Cindy Forgey. Certificates of Appreciation were given to Jim Beck, Nancy Hughes, Anne Lowney, Illa Phillips, Sharon Borer, Sterling Sundheim, and Larry Schock.

Longevity awards were given to Kevin Smith and Beverly Ragsdale Aguirrie for 5 years of service; Dave Adair, Susan Russell, Dave Amman, Terry Voeller, Rob Kingery, and Jesse Aber for 10 years of service; Dixie Brough, Marv Cross, Cindy Forgey, Regina Fullerton, Nancy Hughes, and John Sanders for 20 years of service; Keith Kerbel, Patti Miller, Rich Moy, and Mary Ellen Wolfe for 25 years of service; and Rick Bondy for 30 years of service.

Kraig VanVoast from our Havre Regional Office and Bill Grieman from Conservation and Resource Development were also presented with the Director's Award at a ceremony held Thursday, August 16th for their work on the Fort Belknap Compact.

CONGRATULATIONS TO EVERYONE FOR A JOB WELL DONE!

Jack Stultz, Mike McLane & Mike Roberts - Photo by Devri Roubidoux

INSIDE WATER LINES

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